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King William

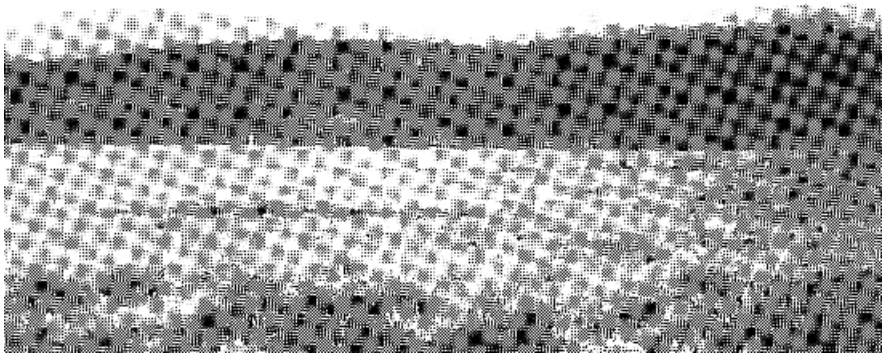
Situated in the Lake st Clair - Lake King William area is a large land system consisting of undulating plains with hills and rocky scarps. Geologically Pleistocene glacial deposits dominate although there are frequent Jurassic dolerite outcrops.

The piedmont type glacier (Derbyshire 1963) responsible for many depositional and erosional features in the area, originated at the head of the Narcissus Valley in cirques carved from the DuCane Range. It was heavily augmented by Central Plateau ice (which glacially abraded the plateau edge) and three valley glaciers which flowed down Cephissus, Marion and Hamilton Creeks to the west (Derbyshire et al 1964). The Cuvier Valley west of Mount Olympus probably also supported glaciers during the Pleistocene. The erosional power of the St Clair glacier is most obvious in the Lake itself, (>200 m deep), the steep smooth slopes of Mount Olympus and similar slopes on eastern aspects of the Traveller Range. Depositional features are best developed on valley floors and flats where moraines, outwash deposits, hummocky moraines undifferentiated ground moraines and varved lake deposits occur. The most striking of all are the end moraines which litter the area between the southern end of Lake St Clair, Derwent Bridge and King William saddle. These moraines often dammed undifferentiated glacial material which flowed in ice melt from retreating glaciers, forming extensive flats which are now covered by widespread peat deposits. Many of the slopes are covered in places by boulder fields which are a result of nivation processes.

Stony, yellowish brown gradational soils occur in most components, all of which are deep, and high to moderately permeable. Organic loam top soils are common on well drained slope components which usually support tall open forests dominated by Eucalyptus delegatensis. Relatively thick peats cover poorly drained swamps while underlying horizons appear to be unconsolidated glacial till material. Gymnoschoenus sphaerocephalus sedgelands are widespread on these plains. Similar unconsolidated deposits occur below shallow loams or clay loams on moraines where open forest prevails. Both this component and adjoining flats are particularly susceptible to cold air drainage from surrounding slopes and mountains which may be snow covered during any month. Here cold tolerant eucalypts (Eucalyptus coccifera and E. pauciflora) are evident which contrasts with the relatively warmer slope components where the ash species E. delegatensis and E. obliqua are widespread. Swamp components support sedgeland and open heath. Scattered individuals of E. rodwayi, which can tolerate both cold and waterlogged conditions, occur in swamps. These may be waterlogged for extended periods in this high rainfall region.

The main land uses are forestry, hydro-electric power generation and grazing. The land system covers parts of the Lake St Clair and Franklin Lower Gordon Wild Rivers National parks, while most of the land around Lake King William is state Forest.

Hazards include waterlogging, with sheet and rill erosion possible on slopes which are cleared.



View from *Gymnoschoenus sphaerocephalus* dominated sedgeland in the swamps (foreground) to eucalypt dominated well drained flats (middle distance) and *Eucalyptus delegatensis* dominated slopes beyond this. The snow covered ridges in the far distance are the slopes of Mount Rufus (Pelion Land System).

LAND—SYSTEM

King William

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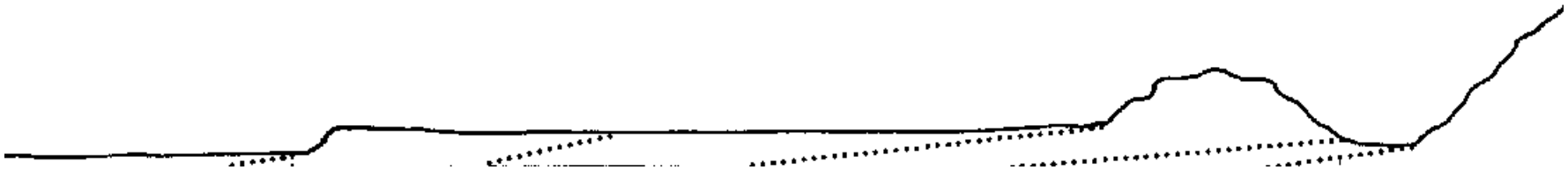
Area(ha):
46192



COMPONENT	1	2	3	4	5	6
PROPORTION(%)	20	20	30	15	5	10
RAINFALL (ma)			Approximate Annual Rainfall: 1500-2000			
GEOLOGY		Extensive Pleistocene glacial deposits with Jurassic dolerite outcrop				
TOPOGRAPHY			Undulating plains with hills and rocky scarps			
Position	(Rocky) Flats	Moraines	Swamps	Rocky Ridges	Wet Gullies	Rocky Slopes
TypicalSlope(°)	0-3	3-5	0-1	15-20	7-10	10-20
NATIVE Structure	Open Forest	Open Forest	Sedgeland/Open	(Tall) Cpen Forest	Closed Forest	Tall Open Forest
Floristic Association (See Appendix 1 for common names)	Eucalyptus pauciflora E. coccifera Lomatia polymorpha Leptomeria drupacea Pultenaea juniperina Lissanthe montana	Eucalyptus pauciflora E. nitida E coccifera Banksia marginata Leptospermum lanigerum Acacia mucronata Callistemon Viridiflorus	Gymnoschoenus sphaerocephalus Lepidosperma filiforme Restio complanatus R. australis Calorophus elongatus Microlaena tasmanica Astelia alpina Bauera	Eucalyptus delegatensis E. nitida E paucif lora E. dalrympleana E coccifera Drimys lancelota Casuarina monilifera Persoonia	Nothofagus cunninghamii Atherosperma moschatum Phyllacladus asplenifolius Eucryphia lucida Eucalyptus delegatensis B. subcrenulata E coccifera	Eucalyptus delegatensis E. dalrympleana E obliqua Hakea listosperma Orites diversifolia Coprosma hirtella C. nitida Lomatia polymorpha L.
SOIL Surface(A)Tex	Loam	Loam-Clay Loam	Peat	Organic Loam-Loam	Clay Loam	Organic Loam-Clay Loam
B Horizon(subsoil) Colour (wet)	Stony, gravelly, yellowish red (5 YR 4/6) to strong brown (7. 5 YR	*Stay,* gravelly, yellowish brown (10 YR 5/8) to strong brown (7. 5 YR 5/6)	Silty loam, sandy clay or other unconsolidated glacial material.	Stony, gravelly yellowish brown (10 YR 5/6) to dark brown (10 YR	Stony, yellowish brown (10 YR 5/6) to mottled grey (7. 5 YR 6/0) strong	stony, yellowish brown (10 YR 5/6) to strong brown (7. 5 YR 5/8) clay loam to light
Permeability	High	High-Moderate		High-Moderate	Moderate	High
Typical depth(m)	0. 30-0. 50	0. 80-1. 00	0. 50->1. 00	0. 40-0. 80	>1. 00	>0. 50
Depth(A)Horizon(m)	0. 05	0. 05-0. 10	0. 35-0. 55	0. 05-0. 20	0. 15-0. 20	0. 05-0. 10
LAND USE			Forestry, grazing, hydro-electric power generation			
HAZARDS	High waterlogging	Low to moderate sheet erosion High		Moderate sheet erosion		High sheet erosion